

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** FLUOROSOLVENT 509

### Other means of identification

**Product Code** Fluorosolvent 509

**Recommended use** Solvent

**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** Nye Lubricants, Inc.

**Address** 12 Howland Road  
Fairhaven, MA 02719 US

**Telephone** 508-996-6721

**E-mail** Not available.

**Emergency phone number** CHEMTREC 1-800-424-9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** The mixture does not meet the criteria for classification.

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** Not classified.

### Supplemental information

Not applicable.

## 3. Composition/information on ingredients

### Mixtures

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
BUTANE, 1,1,1,2,2,3,3,4,4-NO NAFLUORO-4-METHOXY-		163702-07-6	50
PROPANE, 2-(DIFLUOROMETHOXYMETHYL) -1,1,1,2,3,3,3-HEPTAFLUORO-		163702-08-7	50

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

**Inhalation** If the affected person is not breathing, apply artificial respiration. If symptoms develop, remove affected person from source of exposure into fresh air. Get immediate medical attention. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if symptoms occur. Wash clothing separately before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. Get immediate medical attention.

<b>Ingestion</b>	Get immediate medical attention. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do it without risk. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
<b>Specific methods</b>	Move containers from fire area if you can do so without risk.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the MSDS. Provide maximum ventilation, especially in low places where heavy vapors might collect. Observe precautions from other sections.
<b>Methods and materials for containment and cleaning up</b>	Soak up with inert absorbent material.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Clean contaminated surface thoroughly. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS. Clean up spills immediately, observing precautions in Protective Equipment section. Sweep up and shovel into suitable containers for disposal.
<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Loosen closure cautiously before opening. Do not handle or store near an open flame, heat or other sources of ignition. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Avoid breathing gas/vapors/mist/fumes. Do not take internally. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Wash thoroughly after handling.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep in a well-ventilated place. Keep away from heat and sources of ignition. Store in a closed container away from incompatible materials. Store in cool place. Store away from incompatible materials (see Section 10 of the MSDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
BUTANE, 1,1,1,2,2,3,3,4,4-NONAFLUORO-4-METH OXY- (CAS 163702-07-6)	TWA	750 ppm
PROPANE, 2-(DIFLUOR OMETHOXYMETHYL)-1,1, 1,2,3,3,3-HEPTAFLUORO- (CAS 163702-08-7)	TWA	750 ppm

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses; chemical goggles (if splashing is possible).
<b>Hand protection</b>	Not normally needed.
<b>Other</b>	Wear suitable protective clothing. Wear nitrile, neoprene, PVC or viton gloves.
<b>Respiratory protection</b>	An air purifying respirator with an organic vapor cartridge may be used under certain circumstances where airborne concentrations are expected to exceed exposure limits, or if irritation or symptoms are experienced. Respiratory protection must be provided in accordance with 29 CFR 1910.134. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	When using, do not eat, drink or smoke. Launder contaminated clothing before reuse. Wash hands thoroughly after handling.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid. Liquid
<b>Color</b>	Not available.
<b>Odor</b>	Slight
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.

### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.

<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

### Other information

<b>Density</b>	1.50 g/cm <sup>3</sup>
<b>Kinematic viscosity</b>	0.41 cSt
<b>Shelf life</b>	4 years

## 10. Stability and reactivity

<b>Reactivity</b>	None known.
<b>Chemical stability</b>	Material is stable under normal conditions. Stable.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Heat, flames and sparks. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids, alkalis and oxidizing agents. Alkaline metals. Alkaline earth metals. Powdered metals. Halogenated compounds.
<b>Hazardous decomposition products</b>	Hydrogen fluoride. Carbonyl fluoride.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Knowledge about health hazard is incomplete.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Knowledge about health hazard is incomplete.
<b>Eye contact</b>	Knowledge about health hazard is incomplete.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.
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### Information on toxicological effects

<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Knowledge about health hazard is incomplete.
<b>Respiratory sensitization</b>	Knowledge about sensitization hazard is incomplete.
<b>Skin sensitization</b>	Knowledge about sensitization hazard is incomplete.
<b>Germ cell mutagenicity</b>	Knowledge about mutagenicity is incomplete.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. This product does not contain any carcinogens or potential carcinogens as listed by ACGIH and IARC. This product does not contain any carcinogens or potential carcinogens as listed by IARC. This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC and NTP.
<b>Reproductive toxicity</b>	Knowledge about health hazard is incomplete.
<b>Specific target organ toxicity - single exposure</b>	Knowledge about health hazard is incomplete.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Knowledge about health hazard is incomplete.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.
<b>Further information</b>	This product has no known adverse effect on human health.

## 12. Ecological information

<b>Ecotoxicity</b>	This material is not expected to be harmful to aquatic life.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Dispose in accordance with all applicable regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

Not regulated as a hazardous material by DOT.

### IATA

Not regulated as a dangerous good.

### IMDG

Not regulated as a dangerous good.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This substance/mixture is not intended to be transported in bulk.

## 15. Regulatory information

**US federal regulations** All components are on the U.S. EPA TSCA Inventory List.  
CERCLA/SARA Hazardous Substances - Not applicable.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

#### US. Massachusetts RTK - Substance List

Not regulated.

#### US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

#### US. Pennsylvania RTK - Hazardous Substances

Not regulated.

#### US. Rhode Island RTK

Not regulated.

#### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** January-19-2014

**Revision date** August-29-2014

**Version #** 04

**Further information** Not available.

**References**  
ACGIH  
EPA: AQUIRE database  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents

**Disclaimer**  
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